

Abstract

A needle-free injection system, including a nozzle having a fluid chamber and an injection orifice in fluid communication with the fluid chamber. The needle-free injection system also includes a filling adapter secured to the nozzle 5 and configured to couple the nozzle with an external supply of injectable fluid to the nozzle to enable filling of the fluid chamber with injectable fluid. The filling adapter may be frangibly secured to the nozzle and/or the injection system may be configured to prevent delivery of an injection from the injection orifice into an injection site until the filling adapter's ability to enable filling of the fluid chamber 10 has been disabled.